

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R938 050886-1650 - Hydraulic System

Sample No: LH0267311

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

Sample Number	LH0267311	LH0258263	LH0258963	LH0243979
Sample Date	19 Dec 2023	08 Oct 2023	09 Aug 2023	31 Jan 2023
Machine Hours	2998	431	1993	575
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	ATTENTION	ABNORMAL	NORMAL

M&F CONCRETE PRODUCTS CO
4002 CATLETT RD
CATLETT, VA
US 20119
Contact: Service Manager



OIL CONDITION

Visc @ 40°C	cSt	46.3	42.5	41.7	44.2
Acid Number (AN)	mg KOH/g	1.05	1.824	1.17	---

T:
F:



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		5561	25326	46388	18439
Particles >6µm		1315	7262	10916	2284
Particles >14µm		152	500	425	46
ISO 4406:1999 (c)		20/18/14	22/20/16	23/21/16	21/18/13
Silicon	ppm	7	6	8	4
Sodium	ppm	<1	4	3	1
Potassium	ppm	3	1	2	1

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	16	7	16	9
Copper	ppm	8	7	7	4
Lead	ppm	1	0	1	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	2	2	2	<1
Chromium	ppm	<1	1	<1	<1
Molybdenum	ppm	0	0	0	0
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

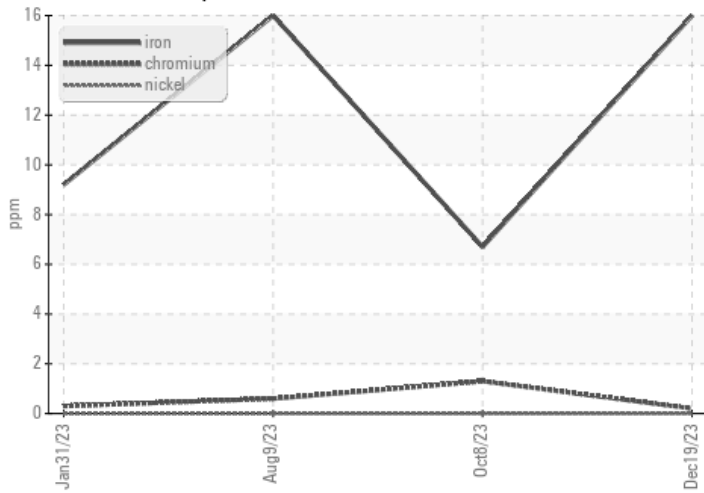
Calcium	ppm	1656	1335	1859	1244
Magnesium	ppm	6	9	8	4
Zinc	ppm	855	705	993	663
Phosphorus	ppm	738	618	821	560
Barium	ppm	0	0	0	0
Boron	ppm	0	0	0	0

Depot: MECCAT
Unique No: 10831565
Signed: Wes Davis
Report Date: 16 Jan 2024

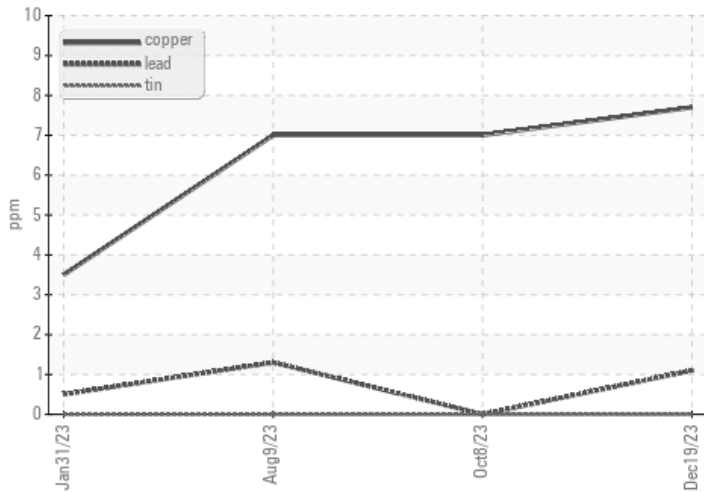


GRAPHS

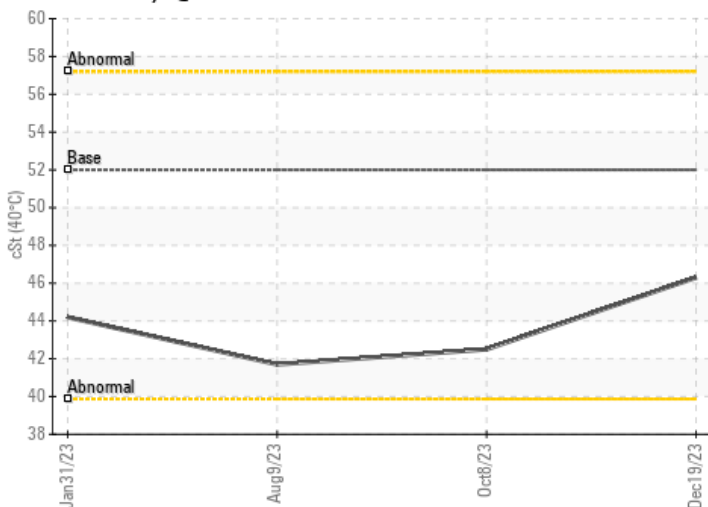
Ferrous Alloys



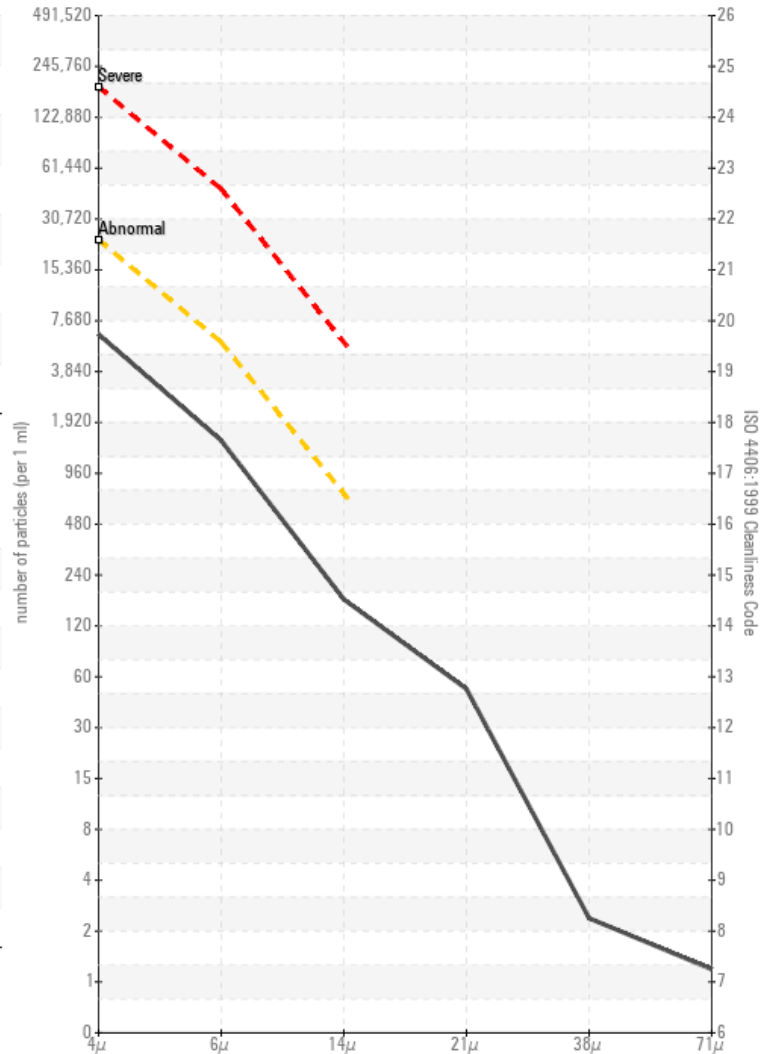
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

